

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for growing a crystal of an Al-containing III-V group compound semiconductor containing Al as a group III element by vapor phase epitaxy in a reaction chamber made only of quartz material, comprising:

a first step of reacting a solid Al with a halogenated hydrogen at a temperature of 700°C or below to produce a halogenated product of Al, wherein the first step occurs in a first reaction zone of the reaction chamber; and

a second step of reacting the halogenated product of Al produced in the first step with a gas containing a group V element at a temperature of 1200°C to 1300°C on the surface of a substrate crystal so as to grow a III-V group compound semiconductor on the substrate crystal, wherein the second step occurs in a second reaction zone of the reaction chamber.

2. (Currently Amended) A method for growing a crystal of an Al-containing III-V group compound semiconductor containing Al as a group III element by vapor phase epitaxy in a reaction chamber made only of quartz material, comprising:

a first step of reacting a solid mixture of group III metals including Al with a halogenated hydrogen at a temperature of 700°C or below to produce a halogenated product of group III, wherein the first step occurs in a first reaction zone of the reaction chamber; and

a second step of reacting the halogenated product of group III produced in the first step with a gas containing a group V element at a temperature of 1200°C to 1300°C on the surface of a substrate crystal so as to grow a III-V group compound semiconductor on the substrate crystal, wherein the second step occurs in a second reaction zone of the reaction chamber.